

CLAIMS

1. A path error monitoring method for  
monitoring for an error in a communication path in a  
5 synchronous network by using an error detection code  
inserted into a first predetermined byte in an  
overhead of transmitted information, comprising the  
steps of:

performing an error detection code  
10 operation for a predetermined range of the  
transmitted information in a sender side;  
inserting the obtained error detection  
code into a second predetermined byte different from  
said first predetermined byte in the overhead of the  
15 transmitted information and sending the inserted  
transmitted information;  
performing an error detection code  
operation for a predetermined range of the inserted  
transmitted information received in a receiver side;  
20 and  
monitoring for an error in a communication  
path between the sender side and the receiver side  
by comparing the obtained error detection code with  
the second predetermined byte in the inserted  
25 transmitted information.

30 2. A sender side apparatus to which a  
path error monitoring method for monitoring for an  
error in a communication path in a synchronous  
network by using an error detection code inserted  
into a first predetermined byte in an overhead in  
35 transmitted information is applied, comprising:  
a second predetermined byte inserting part  
performing an error detection code operation for a

predetermined range in the transmitted information  
and inserting the obtained error detection code into  
a second predetermined byte different from said  
first predetermined byte in the overhead in the  
5 transmitted information.

10 3. A receiver side apparatus to which a  
path error monitoring method for monitoring for an  
error in a communication path in a synchronous  
network by using an error detection code inserted  
into a first predetermined byte in an overhead in  
15 transmitted information is applied, comprising:  
a second predetermined byte comparing part  
performing an error detection code operation for a  
predetermined range in the transmitted information  
received and comparing the obtained error detection  
20 code with a second predetermined byte in the  
transmitted information received.

25 4. The sender side apparatus as claimed  
in claim 2, wherein said second predetermined byte  
inserting part has an inverting part inverting the  
error detection code obtained through the error  
30 detection code operation alternatively at a  
predetermined period and inserting the resulting  
error detection code into said second predetermined  
byte.

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5. The receiver side apparatus as claimed in claim 3, further comprising a synchronizing part taking synchronization when a comparison result of said second predetermined byte comparing part indicates switching from a status where all bits coincide to a status where neither bit coincides.

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6. The sender side apparatus as claimed in claim 2, wherein said second predetermined byte is within an operation range of said first predetermined byte, further comprising a first correcting part computing difference information between original contents in the second predetermined byte and said error detection code obtained through said error detection code operation and correcting contents in said first predetermined byte by inserting a difference between said difference information and original contents in the first predetermined byte into said first predetermined byte.

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7. The receiver side apparatus as claimed in claim 3, wherein said second predetermined byte is within an operation range of said first predetermined byte, further comprising a second correcting part computing difference information between contents in the second predetermined byte in the transmitted information received and the error detection code obtained through said error detection code operation and correcting contents in said first predetermined byte by inserting a difference between

said difference information and contents in the first predetermined byte in the transmitted information received into said first predetermined byte, and a fixed value inserting part inserting a  
5 fixed value into the second predetermined byte in the transmitted information received.

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8. The receiver side apparatus as claimed in claim 7, wherein said fixed value inserting part is capable of variably setting said fixed value.

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9. The sender side apparatus as claimed in claim 6, further comprising a first path alarm  
20 detecting part detecting a path alarm from contents of the overhead in transmitted information, wherein said second predetermined byte inserting part and said first correcting part are halted when said path alarm is detected.

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10. The receiver side apparatus as  
30 claimed in claim 3, further comprising a second path alarm detecting part detecting a path alarm from contents of the overhead in transmitted information received, wherein said second correcting part and said fixed value inserting part are halted when said  
35 path alarm is detected.